

# The 50 MHz DX Bulletin

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The 50 MHz DX Bulletin was founded by Harry Schools KA3B. It is dedicated to the understanding and utilization of long distance propagation in the 6-meter Amateur band. The current editor and publisher, Victor Frank, K6FV, intends to publish one current issue per month along with one technical issue for each of the months missed during 1992 and 1993. Circulation matters and DX reports should be sent to 12450 Skyline Blvd., Woodside, CA 94062-4541 USA. The Bulletin may be freely quoted, provided that credit is given.

## The DX Continues!

Mother nature continued to bless the northern hemisphere with Sporadic-E during July 1993. More Trans-Atlantic 6m DX and 2m Sporadic-E were also noted.

The Perseids, on the other hand, did not match the expectations that the media built up. Another Kohoutec! Well, just make your schedules for the Leonids this November (I was one of the faithful in 1966!) and hope the media keeps quiet.

## VHF DX from Northern California

I've probably put more transmitter watt-hours on 50 MHz these past months than anyone on the West Coast and haven't a single two-way VHF QSO to show for it. I do monitor 50.110 MHz from my study where I compose the 50 MHz DX Bulletin and the Sanyo PC Hackers Newsletter, but the only 50 MHz transmitter I have that is working is the K6FV beacon transmitter, and it's crystal controlled on 50.069. I have been switching and rotating antennas during the summer Es season to the most likely directions, NE, NW, & SW. I don't think I've missed any new countries during the non-work hours I've been home, but it looks like there will be little time for me to do any hardware work for the rest of the year.

So what have I been hearing, and what reports have been forwarded to me from locals? (You'll find the real DX inside!) Here's a chronological tour:

July 5 ~ 1841 K6KLY worked XE1AMA on SSB 50.125  
July 7 0310, I heard KA0CDN/b in DM79 COLO and NOLL/b in KS, at 0340-0400 I heard K6QXY & K6MYC chewing the rag with W5FF & NOLL up the band.  
July 10 0045, heard KH6HME/b on 144.172, contacted Bob, K6QXY on the N6AMG repeater, and find he has been hearing the 2m Hawaiian beacon since July 9 1920, the 432.075 MHz beacon has been in and out, and the 1296 beacon is broke or off. N6CA & N6XQ are in DM10 tonight, DL29 & ? this weekend. Jimmy is in the Caribbean 3-4 more days. He has been worked from Southern California, but not Northern California yet. 0350, KH6HME 2m is still in, but I haven't heard the 432 MHz beacon yet. 0714, KH6HME 2m is still in, and out when I listen again at 1740.

July 15, K6QXY reports six was open to W2, W8, VE2, VE3, & W9 today including FN02 and FN21 grids.  
July 16 ~ 0100, I heard KA0CDN/b in DM79, CO. 1520, I heard KH6HME again on 2m 589. I strain to identify something on Hawaii's Channel 12 video carrier on my scanner with 432 array, but have misplaced my book with the offsets. I hope it's 205.26, as 205.25 and 205.24. MHz are occupied.

July 17 0047, KH6HME is still in on 2m and nil on 432 MHz. 0347 he's gone. 1830, W5FF is in on 6m. July 26 0032, HH2PK is being worked by W6JKV, then AA6G and K6KLY. At 0041 AJ6T is still calling him, but I haven't heard a peep of HH2PK.

August 3 0738, KH6HME is back in on 2m 349, after a "heat wave". (Understand, in the summer, anything over 70 deg on the coast is a heat wave, and it may be 20° or more warmer inland.) I'm praying for heat and sun since I'm planning to reroof 2/3 of our house the next two weeks.

August 6, On our nightly 20m sked, Rene, FO5DR reports his first TEP of the season, starting around 0520 with Hawaiian channel 2, KH6HME/b (6m) in at 0550, and channels 3 and 4 in around 0620 and out around 0715.

August 12, I hear KOWLU, W5UN, WA3HMK and others coordinating (and holding a wake) for the Perseids on 14.345 MHz. Typical comments were: "disappointing" and "stinko!" W5UN remarked that the peak for him was 1700-1800 (on the 11th).

The only unusual propagation I noted was July 12 at 0150, on 28.210 MHz, 459 peak "VVV DE KJ9U/KH6 GRID BL11CR QTH HONOLULU, HAWAII. TEMPORARY BEACON DURING PERSEIDS METEOR SHOWER." Thank you John Shalamkas, without your participation, the Perseids would have been a total bust for me.

Of course this year's Perseids weren't any worse than an average year; it's just that our expectations had been built up to the possibility of a storm with VHF pickings like "shooting 'em in a barrel." Perhaps someone up there rewards the faithful and pours cold water on the fair weather DXer occasionally!

Speaking of cold water, some days we didn't see the sun until noon and the fog came rushing back at 3 PM. Some days it didn't clear at all, and the fog rained down from all the pine and fir trees in our yard. Finally we got a few good days and were able to pull the tarps off and complete the job.

That's one reason why the bulletin is late this month.

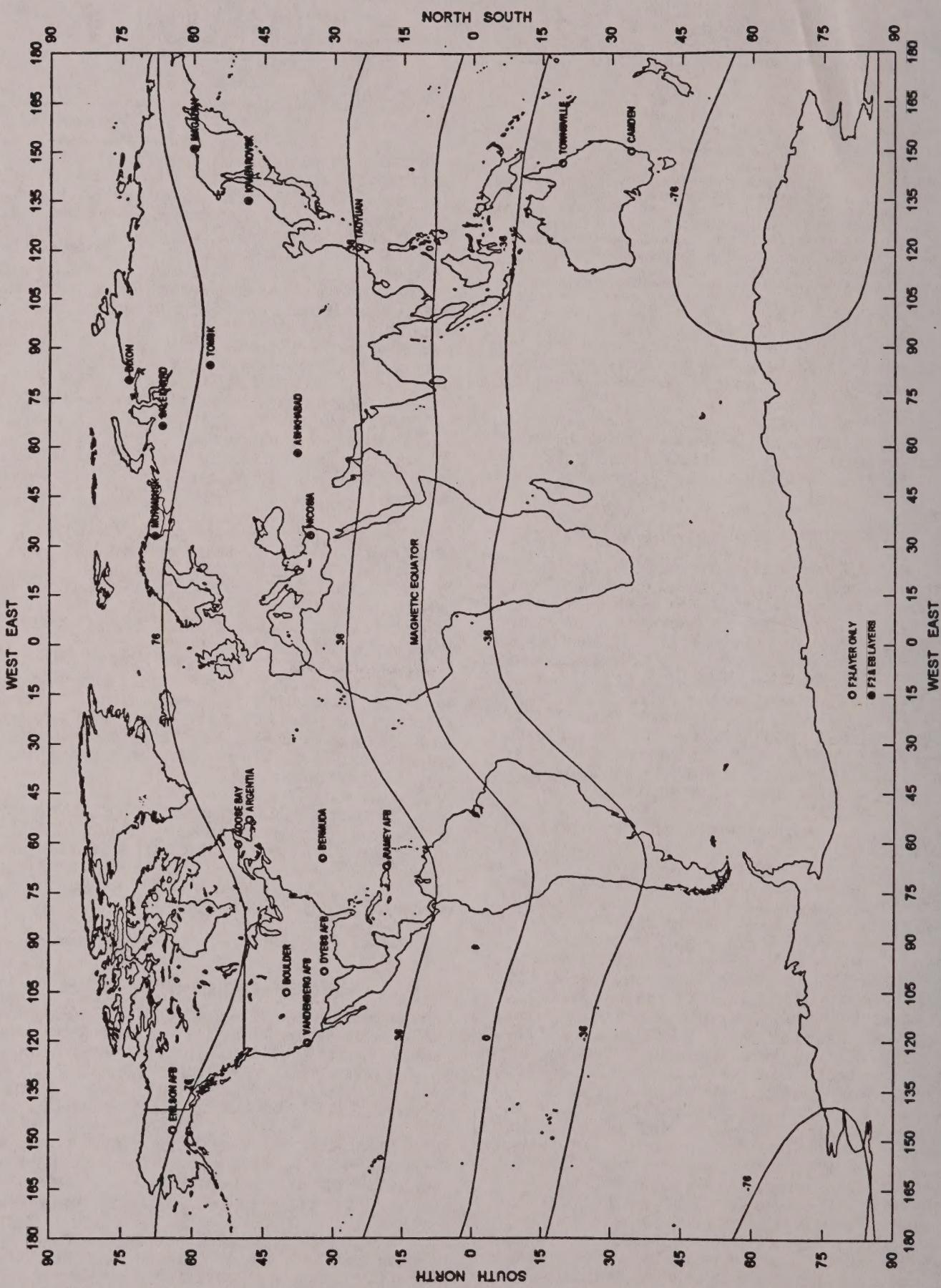
## The Rest of the Story

We published a map last month (in the 1992 November issue) of Ionosphere Vertical Sounding Stations presently sending data to World Data Center-A in Boulder, CO. This issue, on page 2, we're publishing a map of stations whose F2-layer data is available daily from Solar Terrestrial Dispatch at Stirling, Alberta, Canada over the Internet.

In our make-up issue (December 1992), we're presenting mass plots of foF2 vs time for the month of July 1993 for a number of these stations. It's the median value for each hour that prediction program are supposed to match.

You may also be aware that there are networks of oblique ionospheric sounding stations, mostly operated by the military, whose data is not available to the public, or for that matter, even saved.

## V.I. SOUNDINGS AVAILABLE FROM SOLAR TERRESTRIAL DISPATCH, AUGUST 1993



## News of Africa

**Canary Islands:** The EA8SIX beacon was heard by GM4ISM July 4 around 1940. G4UPS reports both EH8ACW and EA8SIX/b in July 9 around 1802. SM7AED reports EH8ACW and EA8SIX/b July 16 between 1800-1900. Last report of EA8SIX is by LA9ZV July 17 at 0807. Tnx G4UPS.

**Ceuta & Melilla Is:** EH9IB on Melilla Is. was active during July according to loggings by G4UPS July 9 at 1212, July 10 1140, July 15 at 1136, and July 17 at 0807, 0915. He also reports EH9MH July 10 at 1158+. SM7AED reports EH9IB July 12 at 1317.

**Malawi:** SM7AED reports hearing 7Q7RM July 4 at 1725. Also see beacon news.

**Morocco:** G4UPS reports CN8HB July 4 at 1900, and worked CN8ST July 9 at 1145. He also reports CN8ST July 10 at 1445, July 17 at 1020, and July 18 at 1035+. SM7AED reports CN8ST July 7 at 1850 and July 16 1800-1900.

## News of Asia

**Cyprus:** G4UPS reports the 5B4CY beacon July 12, 1130-1220; July 14 1109-1300+; and July 19, 1010+.

**Hong Kong:** JH1BSJ reports VS6HYT on 50194 July 11 0226. JA1AUD reports VR2HZ on 50150 July 11 0237. VS6HYT was also reported on 50110 by JF1CZQ July 17 1344 and JE7RJZ July 18 0245. VR2HZ was also reported on 50150 by JE1CCD July 25 0410. Tnx JA1VOK.

**Israel:** G4UPS reports working 4Z4TT in KM72, July 8 at 1653. SM7FJE worked 4X1IF July 7 at 1510, and SM7AED reports 4X4IF July 23 at 1720.

**Kuwait:** G4UPS reports hearing 9K2MU working Europeans July 14 at 1615.

**Lebanon:** Arne, SM7AED relays the following from Tom, DL7AV re: OD5SK activity (July 25). "Just talked with Samir. Samir is on holdiay now staying at his operating QTH. He cannot monitor 6m all the time, so he would be pleased to receive telephone calls whenever someone hears the beacon and wants to QSO. The country code is 961 and the number inside OD is 06-433489. It is impossible to have a direct call from Germany at the moment, but maybe this would work from other countries. Samir's beacon only uses 3W and sometimes 8W but with his main station he would use the amplifier giving him an at least 13 dB stronger signal."

OD5SK, Samir, in KM74wk, was heard working Europeans by G4UPS July 14 at 1315. G4UPS reports the OD5SIX beacon in July 8 at 0852, July 12 1137-1220, and July 19 0947-1031+.

**Mongolia:** JA4OEY/1 reported JT1KAA on 50110 CW July 21 at 0337. JA1VOK reports JT1KAA into JA July 29 at 1010-2200. He also reports JT1/JE7RJZ was to have been QRV on 6m and satellite August 24-31 (QSL via JA7FWR or Bureau), and JT1CS/3 & JT3/KB9IBZ were expected Aug 26 to Sept 2. (QSL via JR0CGJ).

**South Korea:** HL2IPC was reported by JA0GLM on 50160 July 2 2302. HL9UH was reported by JA5CMO on 50110 July 3 at 1000. HL2IKY was reported by JP2NPG on 50101 CW July 6 at 1125. On July 10 between 0111-0440, HL2IPC, HL1LTC, HL9UH, HL3EEC, HL5JJ, and HL3EXY were reported into JA1, JA7, and JA0. At 1445 on the same date,

JG2KKG reported HL3EEC on 50220. On July 20 between 1215 and 1337, HL0YA and HL1MPE were reported into JA0 and JA3. On July 24 between 1422-1513, HL93BUV and HL93BPF were reported into JA1 and JA0. That's how JA1VOK printed it, HL93!!

**Taiwan:** Louie, HL9UH, reports BV2DP in July 3 at 0948, and July 11 at 0214; BV2FI July 11 at 0207, BV2WA/1 July 24 at 1026, and BV0CJC July 25 at 1037.

On July 3 at 0126 and 0821-0841, BT4YHY was reported into JA1,3,5, & 0. JA5CMO reports: July 3 0934-0945, JA5CMO BV2CD, BV2AP, and BV2DP; on July 6, BV5FI at 0945; July 11, BV2AP at 0130; July 24 BV0UHF at 0632, BV6AS, BV2EI, BV2WA/1, BV3AT, BV7JA, BV0CJC, BV2AP/1 at 0935-1210; on July 25 BV0CM, BV2DQ/1, BV4DI, and BV8AG from 0110-0258. Also reported into JA was BV7JB by JA1AUD on July 25 at 0339 and BV0CJC around 0400 by JE1HXZ and JE1CCD. Tnx JA1VOK.

## News of Europe

**Andorra:** C31HK, Fred, in JN02tk, was reported by SM7AED July 9 at 1029 and by G4UPS July 10 at 1353.

**Austria:** G4UPS reports the following heard or worked on 6m during July: OE1ETA July 8 at 0803+ and July 11 at 1631+, OE2RNO July 7 at 1813, OE2UKL July 19 at 1955+, OE5PAM July 20 at 0800+, OE5RVN (JN68jb) July 14 at 1335, OE6DGG July 8 at 1130, July 14 at 1207+, OE9DGV July 8 0803+. SM7AED reports OE6LOG July 21 at 1815+, OE8TPK July 8 at 1731, and OE9MDI July 16 1800-1900.

**Azores:** G4UPS reports CU1EZ July 19 at 1037, and working him July 20 at 1236.

June 26 between 1327-1343, CU1EZ worked EH1KV and YU1EU. June 27 between 1011-1425, he worked EH1YV, EH4BG/6, EH6VQ, EH7AH, EH7DBP, IK7LMX, IS0AGY, ZB2EO, 9H1FP, 9H4W, and 9H5EE. June 28 between 1838-1956, he worked CT1DIQ, CT1EAT, 8-DLs, EH3LL, 4-Fs, G3TJW, OE9DGV, ON1KOT, ON4KST, 3-PAs, and 3-9Hs. June 29 between 2001-2047 he worked CN8HB, EH1AST, GM0EWX, GW3MFY, OZ1BVW, and 3-SMs. On July 5 between 2207-2357 he worked VE1YX, 10-VE3s, 10-W1s, 7-W2s, 3-W3s, 2-W4s, and 3-W8s. On July 6 between 1936-2322, he worked EH1EAH, EH7BVD, LA3EQ, 4-W1s, 6-W2s, 3-W3s, 5-W4s, 4-W5s, 2-W8s, KA0KKO, ZF1DC, ZF1RC, and ZF2QR. Tnx JA1VOK.

**Balearic Islands:** SM7AED reports: EH6ET (8th 1752); EH6FB (8th 1126 and 16th 1800-1900); and EH6IF (16th 1800-1900 and 2004, and 17th 0700-0900). G4UPS reports: EH6FB in JM08 (10th worked at 1209, heard 9th at 2057 and 17th at 1050+); EH6VQ (17th 1050).

**Belarus:** G4UPS reports working EV5D in KO53 July 1 1515-1544, and hearing him til 2206. QSL via DL5BAC.

**Belgium:** SM7AED reports ON1LGS (ex-3X1SG) July 8, 1807; ON4GG (JO20) and ON6XN July 11 around 1608.

**Bosnia-Herzegovina:** SM7AED reports T97M July 23 at 1737 (QSL via DL8OBC) and T97C July 23 at 1821 (QSL via DL5SBA).

A report (via July 93 Six News) from Fudo, T94VO (ex 4N4VO). . . "I am located in Bihac, Republic of Bosnia and Herzegovina. I have recently had to leave my birthplace, Bosanska Krupa, which was destroyed in the war. I am again

active on 6m, and the only station from T9 QRV. I am active from JN74/JN84. I would like to inform you of how to obtain a QSL from me. All Post and Telephone communications with Bosnia, especially with the north-western area are closed. So I can not receive QSLs direct, or via Bureau. So please send QSLs to my manager in Croatia: Drazen 9A3KK, PO Box 673, 41000 Zagreb, Croatia."

**Bulgaria:** SM7AED reports LZ1KDP July 12 at 1408, July 17 at 1153, and July 19 1835-2000. He also reports LZ2UU July 23 at 1847 and July 26 at 1545.

**Corsica:** G4UPS reports working TK/F5EMT in JN42ln July 19 at 1020.

**Crete:** S59UN reported working (on 6m) SV9ANK at 0756 and SV9ANJ at 0758 on July 25. Tnx SM7AED.

**Croatia:** SM7AED reports YU2IQ July 7 1500-1600. G4UPS reports working YU2IQ (in KN0400) July 7 at 1805 and July 16 at 1420. Callbook says YU2 is Croatia.

G4UPS reports the following 6m stations July 7 at 1755-1813+, 9A1CRJ, 9A1EZA, 9A2OB, 9A3AT. He reports working 9A1CCY in JN85 July 8 at 1054; 9A2AY July 7 at 1840; 9A2SB in JN95 July 8 at 0803, and 9A3CCY July 16 at 1437. He also reports hearing 9A/LASTFA July 15 at 1950+; 9A2OB (July 12 at 1147+, July 13 at 1740, July 17 at 1415+); 9A3AT (July 14 at 1203+ and July 19 at 0907+); and 9A3JH (July 19 at 1150).

SM7AED reports: 9A/LASTFA (July 21 at 1815+); 9A2OB (July 7 at 1956); and 9A3JH (July 11 at 1711).

**Czech Republic:** SM7AED reports OK1FAV on backscatter July 14 at 1430 during an opening to Spain and Italy. G4UPS reports OK1MAC July 7 at 1813+, July 11 at 1540, and July 13 at 1700. G4UPS also reports OK1MDK July 5 at 1822 and July 7 at 1813+, and OK1VBN July 12 15 1130 and July 13 at 1700+. He also reports working OK8AIN, Frank, (home call KJ2N) in JO80ad July 8 at 1049, and OK2RX in JN89ie July 14 at 1249. He also lists OK2SBL July 12 at 1305, July 14 at 1203, and July 19 at 1925; and OK2ZPQ July 12 1900-1930.

**Denmark:** G4UPS reports OZ1HDF July 13 at 1800, OZ4EM July 14 at 1207+ and July 16 at 1640+, and OZ4VV July 8 at 0900+, and working OZ5GF in JO54 July 8 at 0832 and OZ7YY in JO46 July 8 at 1942. He reports the OZ6VHF/b July 8 0738+ and 1807+ and July 16 at 1640+; and the OZ7IGY/b July 8 at 0738+, July 11 at 1700, and July 13 at 1800-1805.

**England:** G4UPS and SM7AED have been working almost daily at 0800. They comment, "Escatter and extended tropo" at times. Who knows? The GB3LER/b and GB3SIX/b beacons are logged by both: On July 9 at 1625 SM7AED says GB3LER/b was via aurora, and on July 9 at 1802+ G4UPS says GB3SIX/b and GB3NHQ were via backscatter from 240 deg.

Other Gs in SM7AED's log for June 8 1710-2025 include G1RHW, G1JGE, G3AKU, G3XIU, G7OMO, G7EHL, G3LTF, G0GMS, G8FMT, G3TWG. For June 11, he lists GB3IOJ at 1630, and June 24, G0NPI at 1904.

Other English beacons listed are GB3MCB/b July 16 1800-1900 by SM7AED, and GB3RMK/B July 8 at 0803+ by G4UPS.

**Estonia:** G4UPS worked ES1CW July 8 at 0826, reports hearing him July 1 at 2045 and July 12 at 1800. He also reports working ES3/SM0KAK in KO19sf July 8 at 1724, and hearing ES5QA and ES6QB July 12 around 1702.

**Faroes Is:** G4UPS reports hearing OY9JD (IP620a) July 1 at 2230-2235. He reports OY3JE worked July 6 1950-2005 and heard July 1 2230-2235; July 8 1817+; July 10 1755, and July 15 1356+ and 1658+.

**Finland:** G4UPS lists the following as heard or worked on 6m during July: OH1SIX/B July 20 1615+, OH3LWS July 1, OH1TN July 11 ag 1631+, OH2BNH in KP20 July 12 at 1806, OH3LWP, OH3MF, OH5EH July 12 at 1702+. SM7AED reports OH3LWS in KP11 worked July 1 at 1737, OH7TE/9 in KP36 July 17 at 1015, OH6SIX July 17 at 1120, and OH9SIX July 10 0400-0800 and July 20 1645-1930.

**France:** SM7AED reports that the French PTT has changed their call sign structure as follows:

FA xxx -> no change	FE5xx -> F5xx
FB xxx -> no change	FE6xxx -> F6xxx
FC1xxx -> F1xxx	FE8xx -> F8xx
FD1xxx -> F5xxx	FE9xx -> F9xx
FD6xxx -> F6xxx	F1xxx -> F5xxx
FE1xxx -> F5xxx	FF#xxx -> F#KAA-KZZ (Clubs)
FE2xx -> F2xx	F1 -> CEPT License VHF
FE3xx -> F3xx	F2-F9 -> CEPT License HF

SM7AED logged the following: F/PE1OZT July 8 at 1116 and July 14 at 1300-1400; F/PA0ION July 16 at 1943+; F/PE1OUC July 20 at 1312; F1AUB July 14 at 1300-1400; F1AUX July 8 at 2028; F1JII July 11 at 1615; F1MXE July 8 at 1328; F1NNE July 8 at 1114; F1SAH July 8 at 2027, F3UX July 17 at 0700-0900; F5QT July 26 at 1352+; F6AUS July 8 at 1711; F6BNX July 8 at 1111; F6CSX July 11 at 1814 and July 14 at 1300-1400; F6FEO July 11 at 1618; F6GMT July 16 at 1943, F8IH July 8 at 1637; FC1BYM July 19 at 0829; FC1DXT July 11 at 1622; FC1ERF July 11 at 1556, and FX4SIX July 17 at 1700-1900.

G4UPS notes a French TV Intercomm on 50.050 July 8 at 0900, and July 15 at 1520. He worked F1AHO in JN37qr July 15 at 1658; F1EFW in JN26ks July 19 at 0936, F1MXE in JN05gq July 19 at 1031, F1PUX, Denis in JN16x1 July 15 at 1528; F6ECS in JN12lo July 10 at 1350; F8CS in JN27 July 8 at 0852, and hearing F1JG July 7 1916-2010; F6BNX July 15 at 2140, F8OP July 8 at 0900+, and F8OP calling K1TOL July 15 at 1909.

**Germany:** From July 1993 *Six News*: The temporary licenses issued in April 1990 to 600 amateurs (or which about 250 are active) are under attack by the German broadcast companies. Nobody is sure of the reason for this attack as no TVI has ever been reported. The broadcasters are one of the primary users of the 50 MHz frequency range and they say that according to CCIR recommendation 370, the range of 48.25 MHz TV stations is 200 km, so guard zones of 200 km radius have to be put around each of the three German TV stations in JN39, JN57, and JO40. Powers of 3 to 10 Watts ERP might still be permitted outside of the guard zones, but frequencies will probably be 50.5 to 51.5 MHz (!). Inside the zones, only night time operation would be possible. They also want to have small guard zones around all of the cable-TV-distribution stations. The main German TV program is distributed on channel 2 (48.25 MHz) in almost the whole country. The alternative to the above is that they might stay with the present 600 permit holders on a strict Non-Interference Basis. A decision has to be taken by the Telecommunication Minister in Bonn at the end of this year.

G4UPS's July log lists the following 6m stations heard or worked: DD0VF July 5 at 1822; DJ6TK in JO53fg, July 11 at 1612; DJ9WH July 7 at 1813+; DL/PA3GAN July 8 at 1001; DL1GNM in JN38, July 19 at 1246; DL2SAD in JN48tr, July 15 at 1557; DL7YS July 19 at 1955+; DL8HCZ July 11 at 1612+.

SM7AED's July log lists: DK1KH in JN58, July 16; DK7ZB in JN51 by backscatter July 14 at 1415; and DL6EW in JN47, July 8 at 1139.

**Gibraltar:** G4UPS reports ZB2EO in July 9 at 0800+ and July 12 1600+-1620.

**Greece:** G4UPS reports working SV1DH July 14 at 1309 and hearing SV1OH July 1 1723-1726, SV1SIX/b July 1 1723-1726, July 5 1928-2020, July 8 1655+, July 12 1040 & 1130+ 1220, July 14 1107 & 1203+, and July 15 2010; and SV6SIX/B July 16 1050. The following SV1 stations were also reported into Great Britain: SV1EN, SV1OH, and SV8CS (Zante Is.) July 12 1040+

SM7AED reports: SV1AHX in KM28 worked July 4 at 0921; SV1DH July 24 at 1453 and July 26 at 1512; SV1OH July 7 at 1230; SV1SIX/b July 5 at 1430, July 7 at 1200, July 14 at 1645, July 17 at 0700-0900 & 1120, June 20 1645-1930, July 21 at 0645 and 1815, and July 26 at 1000-1600; and SV7AII in KN20 July 7 at 1730.

**Iceland:** TF/LA6HL/p was worked by G3HBR July 17 at 1804. Tnx G4UPS. SM7AED reports working TF/LA6HL/p in HP94 July 17 at 0956. JA1VOK reports that TF/G4VXE/P worked into the UK August 1.

**Italy:** G4UPS's log for July lists: I0CUT (20th at 0901+); I2WSG (8th at 0803+); I4CIL in JN64, (12th at 1050, worked 15th at 1536 and 16th at 1120); I4CKC in JN54vo, worked 14th at 1207; I4RSH (5th 1928-2020); I4XCC (17th at 1315+); I4YFY in JN64, worked 11th at 1710); I5FLN heard working OJ0 11th at 1710; I5XDL in JN52 worked 4th at 1833, heard 19th at 1150+; I8TWK (13th at 1700+); IC8SDL (8th worked 0937), IK0OKY in JN61, 12th at 1007 & 14th at 1050; IK1EGC (15th worked 1943); IK2GSO (15th worked 1934); IK5JWQ (5th 1928-2020); IK5RLP (4th at 1905); IK6HCX in JN63so, worked 15th at 2110; IK6MLI in JN62 worked 12th at 1102, IK8HIS in JN71dc, worked 16th at 1000.

SM7AED's log for July lists: I0AMU (16th at 1703); I2CSB (12th at 1050); I2FWH (16th 1800-1900); I2JSB (11th at 1743 and 19th at 1815+); I2OKW (19th at 1815+); I5MIK (8th at 1023); I7CSB (10th at 1818 and 16th at 1548); I8TUS (7th at 1230 and 17th 1700-1900); IC8JAH (16th at 1545); IK0OKY (17th at 0703); IK1EGC (10th at 0816 by MS/Escatt, 22nd at 1700); IK6GZM (17th 0700-0900); IK6JF (16th at 1702); IK7FGE (16th at 1542-1551); IK7GAJ (19th 1835-2000); IK8DYD (5th at 0638, 21st at 0807); IK8MKK (14th at 1405); IK8SCL (17th 0700-0900); and IV3GBO (16th 1727).

**Jersey Is.** SM7AED logs GJ7MTD July 19th at 1835-2000.

**Latvia:** G4UPS lists a cross-band (to 4 mtr) contact with YL2FR in KO15 July 8 at 1817.

**Luxembourg:** G4UPS reports the following heard or worked on 6m during July: LX0SIX/B (15th at 1600), LX1BZ (16th at 1640+).

**Madeira:** G4UPS reports CT3FT July 4 2013-2020, July 18 1035, and July 20 1050. WB4WTC reports working CT3FT

June 15 2220-2305 and July 6 sometime between 1418-2307. Tnx JA1VOK

**Malta:** G4UPS's log for July shows the following 6m stations heard or worked: 9H1BT (17th at 1550); 9H1SIX/b (July 4 at 1925, 19th at 1037+); 9H5EE (14th at 1810+, 17th at 0730, 18th at 1740+); 9H5ET (16th at 1050+, 18th at 1740, and 19th at 1031+). SM7AED logged: 9H1BT (5th at 1753), 9H1SIX/b (9th at 1020+); 9H3IB (8th at 1140+); 9H4CM in JM76, 5th at 0730; 9H5EE (7th at 1230); and 9H5ET (21st at 0747).

**Market Reef:** G4UPS reports working OJ0/OH1VR July 10 1622-1629 on 50.100 after being alerted by G3HBR. He also reports OJ0/OH1VR in July 11 1618-1631, and that he heard I5FLN working OJ0/OH1VR July 11 at 1710. SM7AED reported OJ0/OH1VR via aurora July 9 at 1735.

**Moldavia:** SM7AED reports working UO5OK July 19 at 1830, and that SM7FJE worked him a bit later. Mail (to SM7AED) from DJ7QY says that he worked him on 50.115 the same day at 1842. The name of UO5OK is Mike and QSL via UT5RP, Dmitry Slyusarenko, Box 300, 270000 Odessa, Ukraine Republic. The QTH locator is KN46.

**Netherlands:** G4UPS reports working PA3FYM in JO22 July 1 at 2215.

**Northern Ireland:** SM7AED reports GI8FLQ July 8 at 1747 and GI0SFX July 24 at 1837.

**Norway:** G4UPS reports working LA3EQ July 6 at 1858; LA6QBA/P in JP61bj July 15 at 1451 (and hearing him July 10 at 1800); and LA9ZV (July 1 at 2155, July 8 at 0738, and July 17 at 0823). He also reports hearing LA1KHA July 17 at 1415+, and LA8UGA in JQ90ja July 10 at 1759 & 1825. SM7AED reports that on July 1 at 0110 LA9ZV worked K8MD.

**Poland:** G4UPS reports the following heard or worked on 6m during July: SP3PMA (16th at 1640), SP5EFO (7th at 1727, 11th at 1745, and 13th at 1745); SP5HCJ (8th at 1807+); SP5HEJ (12th at 1340, 16th at 1610); SP5NFH (19th at 1840+); SP5OAP (8th at 1807+ and 19th at 1925+); SP5TAW in KO02 (19th 1840-1856); SP6GWB, Stan in JO80hj, July 11 at 1814; and SP7HT July 19 at 1925+.

SM7AED reports SP5CCC, SP5EFO, SP5HEJ, and SP7HT July 1 1908-1932.

**Portugal:** G4UPS's July log reports the following 6m stations heard or worked: CQ7CBI (18th at 1545 and 20th at 1330); CT0SMB/b (5th 1928-2020, 9th 1315 & 1933+-2230, 12th 1545+, 15th 1202+, 16th 1137+, 17th 1150, 18th 1620+ & 1940, 19th 1235, 20th 1050+ & 1611+); CT0WW/b (5th at 1928, 9th at 1250 & 1800+) 10th at 1227, 12th at 1545, 15th at 1130+, 18th at 1640+ & 1940, 19th at 1010 & 1220, 20th at 0901, 1037+, & 1611+); CT1BGE/EH7AH (18th at 1620); CT1BH (5th at 1900 and 9th at 1800); CT1LN (15th at 1202-1356+); CT1WW (9th worked at 2100, 18th at 2120); CT1ZC (5th 1928-2020); CT4KQ (18th at 1712 working W stations). During the July 15 opening, G4UPS was able to get OY3JE and CT1LN on the same frequency so they could make the first CT/OY 6m QSO.

SM7AED reports CT0WW/b (July 11 at 1630, July 16 1800-1900, July 17 1700-1900, July 20 at 1120, and July 21 at 1935); and CT1AUW July 16 1800-1900. WB4WTC reports working CT4KQ and hearing CT0WW/b July 18 between 1605-1648. Tnx JA1VOK.

**Rhodes:** SV5TS was heard on 6m by G4UPS July 14 1110-1201 working Europeans, at 1625 working OE/9A, July 16 1425-1530 and 1940-1955, and July 19 at 0947, 1031+, and 1240. SM7AED reported SV5TS on July 23 at 1807.

**Romania:** SM7AED reports YO4BZC (July 12 at 1025); YO7VJ (July 7 at 1530 and July 16 at 0528); and YO9IE (July 7 at 1500-1600, and July 26 at 1545).

**Six News** relays a FAX from Doru, YO4BZC, in KN45ak, asking for QSLs to go via I8YGZ (Pino Zamboli, Via Trieste 30, I-84015 Nocera Super, Italy). Doru runs a TS680s and HB9CV and to date has worked 29 countries including ZS6, A22 and 7Q7. He made 24 QSOs during the UKSMG contest.

**European Russia:** G4UPS reports Russian TV inband on July 21 at 1758. SM7AED reports RA3YO July 9 at 1020 and working UA2/DK2ZF in KO14 July 1 at 1853.

**San Marino:** G4UPS reports T70A in JN63fw (worked July 8 at 1655, heard July 7 at 1916+, July 17 at 1315, and July 19 at 1225). SM7AED reports T70A (July 8 at 1617, July 17 at 1406, July 19 at 1835-2000, July 23 at 1839, and July 26 at 1232).

According to July 93 *Six News*: If you worked RU1R from KO82bw between June 4-8, the QSL goes via R3VHF. (not listed in 93 callbook!)

**Sardinia:** G4UPS reports hearing IS0AGY/P in JM48 (July 8 at 0900+, July 9 at 1140, July 10 at 1353+, July 14 at 1810, and July 19 at 1037+) and working IS0/HB9CXZ in JM49sd July 15 at 1756; ISOIGD in JM49gv, July 15 at 1630; and IS0KEB July 14 at 1057. SM7AED reports IS0AGY/P (July 16 at 1105+, and July 21 at 1021); and IS0OMH (July 8 at 1945).

**Scotland:** G4UPS reports GM0ILB (July 10, 1730-1736) and GM0PKW in IO68wf (worked July 15 at 1410). SM7AED reports the following stations on July 8: GM1WSH at 1726, GM7MWO at 1729, and GM4ISM at 1744.

**Serbia:** SM7AED reports: YTIIQ (July 26 at 1010); YU1AD (July 7 at 1532); YU1EU (July 19 at 1835-2000); YU1FZ (July 12 at 1425 and July 23 at 1240); and YU1MW (July 21 at 0807+). G4UPS reports: YT1AU (July 7 at 1813+); YU1ABA (July 8 at 0900+ and July 13 at 1700+); YU1AD in KN04 (July 17 at 1415+, July 19 0838, worked 0922); YU1AU also in KN04 (July 7 worked 1906, July 17 1415+); both YU1AD & YU1AU worked July 14 at 1528; YU1MW also in KN04 (July 14 at 2105+, July 19 worked 0853, July 20 worked 0920); and YU1QC in KN94 (July 7 worked 1900, July 14 at 1203, and July 20 at 0901+).

The 4N1SIX/b beacon in KN04oo (same grid as YU2IQ in Croatia? !! Your editor's confused.) was reported on 50.0465 by SM7AED (July 16 0525, July 17 1700-1900, and July 19 at 1815). It was reported on 50.048 MHz with FSK emission by G4UPS (July 14 at 1455 and 2105+), and on 50.047 (July 15 at 1950, July 16 at 1245+, July 17 at 1415+, July 19 at 0830 & 1220+, and July 20 at 0901+).

**Sicily:** G4UPS reports: IT9DQM (July 8 at 2120); IT9SGC (July 8 at 0900+, IT9TDF (July 14 at 1830-1840); and IT9THD (July 18 at 1740+). SM7AED reports: IT9CHU (July 23 at 1744); IT9DQM (July 20 at 1244); IT9ESW (July 8 at 1337); IT9IPQ/IT9 (July 19 1835-2000); IT9LFQ (July 17 at 1157); IT9PRR (July 16 at 1105); IT9THD (July 14 at 1455); and IT9VDQ (July 16 at 1723).

**Slovakia:** G4UPS reports the following heard or worked on 6m during July: OM3CFN (8th at 0852+ and 20th at 1135); OM3CLS (16th at 1640+ and 19th at 1840+); OM3ID (11th at 1559 and 19th at 1925+); and OM3OM (19th at 1925+). SM7AED reports OM3ID (July 1 at 1941); and OM3WMP in JN98 (July 23 at 1744).

**Slovenia:** Editor: Forgive me for placing 9A in Slovenia last month. I suspected that 9A and S5 were not both Slovenia, but my atlas knows nothing of Yugoslavia's breakup; I suspect the atlas makers would rather this war be over with so they know where to draw the borders.

SM7AED reports S53AK (July 8 at 1725) and S53ZW (July 21 at 1815). He also passes along the report that S59UN worked SV9ANK and SV9ANJ on Crete at 0756 & 0758 respectively on July 25.

G4UPS reports the S55ZRS/b (July 5 at 1000-1015, July 7 at 1755, July 8 at 0738+, July 11 at 1631+, July 12 at 1120, July 13 at 1740+, July 15 at 1538 & 1950+, July 16 at 1245+, July 17 at 1350+, July 19 at 0907+, 1235+, and 1755, and July 20 at 0901+). He also reports S51GW (July 7 at 1805+, July 8 at 0803+, and July 20 at 0901+); S51RW in JN75, (worked July 14 at 1440); S51UF in JN76up (worked July 7 1813 heard 1755+, July 11 at 1612+, and July 19 worked at 0919); S52NR in JN75 (July 14 at 1526); S53AK (July 14 at 2105+); S53ZW (July 7 at 1813+, worked July 19 at 0907); S57AC in JN76 (July 8 heard 0803+, worked 1058, and worked July 12 at 1147); S59AM (July 7 worked at 1916); and S59UN (July 17 at 1350).

**Spain:** WB4WTC reports working EH7CD and EH7BVD July 18 between 1605-1648.

SM7AED's log for July lists the following worked or heard: EA/LA7IB in IM98 (11th 1610); EA3VHF/b (9th 1020+); EH1BCB (25th 0907); EH1EBJ (14th 1300-1400); EH1KV (19th 0854, 25th 0850); EH1YV (25th 0909); EH2AGZ (12th 1241); EH2JG (14th 1300-1400); EH3AQJ (14th 1300-1400, 16th 1800-1900); EH3BTZ (11th 1822, 19th 1835-2000); EH3CUU (11th 1630); EH3DUW (8th 1140); EH3EDU (8th 1336); EH3IH (7th 1815); EH3JA (14th 1403); EH3LL (11th 1630, 12th 1050+, 17th 0700-0900, 26th 1352); EH3MD (20th 1150); and EH4CGN/1 (14th 1453 and 17th 1700-1900).

G4UPS's log for July lists the following worked or heard on 6m: EA/LA7IB (15th worked at 1356); EA3VHF/B (10th at 1353+); EH1DVY/P in IN62fw (15th 1330, 17th 0730+, 20th worked 1037); EH1EBH in IN73fm (15th worked at 1422); EH1EH (20th at 0753); EH1KV (18th at 1545+ & 1620+); EH1TA/P in IN63 (9th worked 1933 in 11th 2230); EH2LL (4th at 1905); EH3BTZ (4th at 1905); EH3CHN (10th at 1615); EH3CUU (4th at 1852, 19th at 0947+); EH3JA in JN11bi (10th worked at 1520); EH3KU in JN00jv (4th worked 1944, 15th worked 1933); EH5BZS and EH5CHT (17th at 1050+); EH7AG (9th at 1212+); EH7AH (5th at 1900, 9th at 1610, 10th at 1158, 15th at 1356+, 17th at 1550); EH7AJ (12th at 1600, 15th at 1130, 21st at 1002); EH7CD (18th 1615-1640 heard working W stations); EH7ERS (4th at 1852, 9th at 1212+, 15th 1220+, 20th 0800+); and EH7FTH in IM87 (10th worked 1154, 20th 0800+).

**Sweden:** G4UPS reports the following heard or worked on 6m during July: SK6SIX/B (1st at 1723 and 2101+); SM0CHH (1st at 2101+); SM0FFS in JO99aa (1st worked at 2101); SM0KCR (12th at 1700, 20th worked at 1611); SM3BIU/SM3NRY (20th at 1615); SM3JFF (12th 1702+); SM3NRY (1st at 2140); SM5INC (12th at 1701); SM7AED in

JO66 (almost daily at 0800 sked, 8th at 1026); SM7FJE in JO65 (8th 0753 & 0900+).

SM7AED reports SM5EQY on backscatter July 16 at 1705 during an opening to Italy. He also reports a new grid locator activated in SM3. SM3RPP, Alf, has a second QTH in JP74bt and is now QRV on 50 MHz. So also is his father, SM3RPQ. QSL to Alf Holmgren, Immotorpsv. 21, S-69152 Karlskoga, Sweden.

**Switzerland:** G4UPS reports working HB9BFG and HB9STY July 15 at 1637 and 1950. SM7AED reports HB9AMZ (July 8 at 1636); HB9BFG in JN47il (July 15); and HB9STY (July 11 at 1838).

HB9AMZ's best DX (as reported by JA1VOK) is: June 28 1446-1752 E15FK, 15-Gs, GD0TEP, GW3JXN, SW6ZV, GW7NGP; June 29 1500, EV5M; July 4 1345, SV4AAQ; July 5 0546, IT9DEC; July 8 0945, 9H1A2; 1620-1720, EHIESJ, EH6ET, ISOFGN, IS0OMH, OH3XA, OH3NGW, OZ3ZW, OZ5II, SM7AED, SM7FJE, SM7JUG, SV4AFY, YT1AU, YU1ABA; July 11 0950, SV4AAG, SV4XYE; July 12 1612, SM0KCR.

**Vatican:** G4UPS reports working HV4NAC July 16 at 1005.

**Vojvodina:** (Part of the former Yugoslavia. What country is it now?) G4UPS reports YU7AU (July 12 at 1130+, July 14 at 2105). SM7AED reports YUNW? (a misprint, I assume) July 23 at 1227.

**Wales:** SM7AED reports GW1MCD July 8 at 1737 and GW4UWR July 8 at 1032.

## News of North America

**Anguilla:** WB4WTC is reported to have worked VP2ECW (June 17 at 1305); VP2EE and VP2MO (and to have heard VP2EHF (July 3 between 1330-2400). He also reported hearing VP2MO/b July 3. Tnx JA1VOK.

**Cayman Islands:** WB4WTC reports hearing ZF1DC and ZF2QR July 2 at 1720; working ZF2QF and hearing ZF1DC July 3 between 1330-2400; hearing ZF1DC and ZF1RC July 5 between 1625-2325, and ZF2QR (heard July 6 between 1418 and 2307, worked July 9 at 1311, and heard July 10 at 1406); and hearing ZF1RC July 11 between 2201-2216. CU1EZ reports ZF1DC, ZF1RC, and ZF2QR July 6 between 1936-2322. Tnx JA1VOK.

**Cuba:** WB4WTC reports hearing CO2JA (July 11 2201-2216) and CO2KK (May 23 at 1725, June 21 at 1416, July 2 at 1720, heard July 5 1625-2325, July 6 0036, and 1418-2307.) Tnx JA1VOK.

**Dominican Republic:** WB4WTC reports hearing HI18DAF (July 3 1330-2400, July 4 1630, and July 6 1418-2307). Tnx JA1VOK.

**Greenland:** WB4WTC reports hearing OX3VHF/b June 16 2332-2335, and July 14 0110-0254. Tnx JA1VOK.

**Guantanamo Bay (Cuba):** WB4WTC reports working KG4CB July 6 1418-2307. Tnx JA1VOK.

**Haiti:** WB4WTC reports working HH2PK (May 15 0005); hearing HH2PK and HH7PV (July 3 1330-2400); HH2PK (July 5, 1625-2325); HH2MK (July 6 1418-2307 and worked July 7 0031-0038 and July 11 1313-1350). Tnx JA1VOK.

**Jamaica:** WB4WTC reports hearing 6YSIC July 3 1330-2400 and July 6, 1418-2307. Tnx JA1VOK.

**Mexico:** WB4WTC reports working XE3EB (July 16, 2332-2335, July 2 at 2107, heard July 4 0013-0155); working XE1ABA (July 2 at 1720); XE3AWK July 3 1330-2400, and XE3WMA July 14 at 1439. Tnx JA1VOK.

**Puerto Rico:** WB4WTC reports hearing KP4ZB, KP4EIT, and KP4EOR July 3 1330-2400; and hearing KP4BZ July 11 1313-1350.

## News of Oceania

**Australia VK6 (West Australia):** Louie, HL9UH reports working VK6JQ July 24 at 1030.

**French Oceania:** Rene, FO5DR, indicates a late start to the TEP season, but it has started—see page 1.

**Midway Island:** Art Edmonds (KH4AE/KH2), HCR Box 17356, Inarajan, Guam 96917, writes: "On 20 Oct 91 I made 28 contacts on 50.155 MHz with 5 W. They were WB9AJZ/6, K6S, N6AMG, WA6KLK, W6PO, K6MYC, N7DB, N6RZ, KH6CP, W6XP, WA8LLY, WA6PEV, K7ICW, WA6BYA, K6FV, W6CPL, AA6S, N6CA, N6VI, K6HHJ, K6ODV, K6KLY, N6XQ, K6STI, K6CH, WB6JJE, KI6BU, & K7RWT. Be glad to send replacement cards for any that have the wrong date."

**Minami-Torishima Island:** JA1VOK reports JH1MAO/JD1 July 4 at 0246.

**Papua New Guinea:** P29CW was logged July 2 on 50110 CW by JP2NPG and JA5CMO at 1116 and 1155 respectively.

## News of South America

We have no reports of anyone hearing or working South America since June 12. Reports would be appreciated.

## Beacon News

**Canary Islands:** From *Six News*: EA8SIX has been heard around Europe this summer, operating on 50.075 MHz. It is not known if this beacon is 24 hr operation or just a keyer.

**Crete:** From *Six News*: The SZ2DH beacon is no longer active. It has been donated to the SV9 6m gang and will soon be QRV from there. A call and frequency have yet to be decided. Tnx SV1EN.

**Malawi:** From July 93 *Six News*: Unfortunately there has been a last minute "hiccup" with the shipping/installation of (the 7Q7SIX) beacon. It has been awaiting collection for some three months now. 7Q7JL's visit to the UK has not yet materialised and more seriously, at the last minute the Malawi PTT would not issue a license to run the beacon. It is not known if/when 7Q7SIX will be active.

**Sabah, Malaysia:** From *Six News*: The South Midlands Communication team who were recently in Sabah Malaysia (9M6) providing communications for the Camel Trophy event, have reported a remarkable achievement.

Richard Diamond, G4CVI, having received unprecedented co-operation from the Sabah licensing authorities with respect to both Amateur and Commercial operations, obtained special permission to operate on 50 MHz as G4SMC/9M6. A report on the 6m operation was passed to Alfons 9M6UH (President of the Sabah ARS) and to Mr Micheal Chin of the

licensing authorities along with the offer from SMC Ltd to donate a 50 MHz beacon to Sabah.

At a dinner for the South China DX group, 9M0S, hosted by the Sabah Tourism board of which Richard, G4CVI, and Richard, G8SVC, were guests of honor, Mr. Latif of the licensing authority announced that it has been agreed with the local authority that a license will be issued for the beacon on 50.014 MHz under the call 9M6SMC, coincidentally the beacon will be located on the roof of the Sabah Medical Center. It is envisaged that operator licences will follow in due course. Tnx G4CVI.

**Slovenia:** From July 93 *Six News*: S55ZRS (50.014 MHz) has a new location on Mt. Kum at 1219 m ASL. Power is 8 W to a ground plane from JN76mc. Tnx S59AM.

**Svalbard:** From *Six News*: LA1QCA was QRV from Svalbard as JW1QCA from April 20 to May 4 1992. During his visit, a two element yagi was installed on top of the 100 ft tower and it remains there for future operations. Tor LA1QCA would like to appeal for anyone with a Pye 4m transceiver (or similar) to get in touch with him at the address below. He would like to install a beacon at the club station and requires some robust ex PMR equipment at a give away price. Preferably free! (Thanks LA9ZV). LA1QCA, Tor Ulf Nilsson, O Juul Olsensvn 23, N-1742, Klavestadhaugen, Norway.

**Zimbabwe:** GJ4ICD mentions in July 93 *Six News* that a beacon for Z21SIX has finally completed and soak tested for many weeks.

### Indicators

From July 93 *Six News*: Isle of Wight Radio has a studio link on 48.260 MHz on NBFM. This may prove useful as an MUF watch for stations outside the UK. The channel carries DJ + pop music, advertising and local news, with regular ID. You will also hear comments from DJ to studio manager. (Thanks G4JCC).

### DX-pedition News

**Italy:** From July 93 *Six News*: I2ADN Grid Square DXpedition 1993. As usual Angelo has been very busy running pile-ups from rare Italian squares. For the UKSMG contest on June 5th, Angelo operated from I1S1xx. From August 1st, for 15 days, he was to activate JM88 and JM89, and possibly JM87. QSL to I2ADN: Angelo D, Via Ortigara 19, I-22070, Casnate con Bernate (CO), Italy.

**Liechtenstein:** Pierre HB9QQ will be QRV (night time only) from Liechtenstein, for one week, beginning September 17. He will concentrate on 2m EME, but will look on 6m MS in the early mornings. Tnx HB9QQ via *Six News*.

**Mellish Reef, VK9:** is expected September 19-29. Tnx JA1VOK.

**Mongolia:** JT1/JE7RJZ was to have been active on 6m and satellite August 24-31. QSL via JA7FWR or Bureau. JT1CS/3 & JT3/KB9IBZ were to have been on August 26-September 2. QSL via JR0CGJ. Tnx JA1VOK.

**Tunisia:** From *Six News*: A multi-national DXpedition was to have taken place from Tunisia for 10 days sometime in August. A total of 16 operators from the USA, Japan, Spain, Italy, Bulgaria, Russia and a few other countries were to operate three stations on all bands/modes including 6M.

### NATAL DX GROUP

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### DXPEDITION TO ST PETER & ST PAUL ROCKS - BRAZIL

NATAL DX GROUP planned to return to St Peter & St Paul Rocks-PY0S, in May/93, but we had some problems. We met with the operators, and all agreed to move the date to Jan/Feb 94 so we will have sufficient time to plan a safe trip now.

Our plans are to activate PY0S with four operators, running two stations full time in CW/SSB, all bands and modes, including WARC, RTTY, 6M band, satellite operation, and, if possible, packet. We will be there for three entire weeks!

The calls: PY0SK (PS7KM will be the QSL manager for SSB, RTTY, 6M (CW/SSB), packet, and satellite); PY0SP (PT7WA will be QSL manager for CW/HF). Our operation will be the first satellite and packet operation from PY0!

We estimate the cost at US\$4000 for food, rent two generators, accumulators, gas, antennas, coax cables, etc. All donations are welcome. Natal DX Group is a modest amateur's radio group and we do not have financial support here as a country is in a hard economic recession.

Natal DX Group is asking for financial support from major DX Foundations, clubs, DX enthusiasts, friends, etc. So, if you would like to support us, please mail your donation to the above address via AIR and REGISTERED MAIL is preferred. We thank you very much in advance for your support. --PS7KM.

### 1993 Mid-Atlantic Conference

You just have time to make your reservation for the 1993 Mid-Atlantic VHF Conference. The conference, our 17th annual one, will be held on Saturday, October 2, 1993 at the Days Inn motel, 245 Easton Road (Rte 611) in Horsham PA, just north of Philadelphia. Horsham is just three miles south of our annual hamfest (HAMARAMA '93) being held the next day, Sunday, at the Bucks County Drive-In Theater.

Please make reservations at the Days Inn before September 17 by calling (215)674-2500 or FAXing (215)674-0145. Mention the "Packrats" for special room rates. The cost of food at the conference will be a bit more reasonable this year since there is "Otto's", a German-American restaurant on the other side of the hotel parking lot with a dining room large enough to accommodate everyone. Ottos features meals between \$5 and \$10 and guaranteed to fill your belly. This will give you more money to spend on VHF and Microwave goodies that you find at the hamfest the next day.

We have not finalized all the speakers yet; stay tuned to Cheesebits for additional announcements. As usual, we will have an outstanding set of speakers with a diverse and challenging talks in the VHF and Microwave areas. If you have any questions or if you or someone you know would like to be considered for giving a talk in one of the open time slots available, write me or give me a call.

The conference fee of \$10 includes entry to "Hamarama '93" on October 3. Send to:

John Sorter, KB3XG, Conference Chairman,  
1993 Mid-Atlantic VHF Conference, PO Box 451,  
Montgomeryville, PA 18936